

oesophagus, the physiology of the digestive processes, methods of gastric analysis, the size and position of the stomach, acute dilatation of the stomach, gastric ulcer, gastric carcinoma, tests for occult blood, appendicitis, carcinoma of the appendix, intestinal tuberculosis, intestinal obstruction, pancreatitis, jaundice, cirrhosis of the liver, etc. J. Rose Bradford discusses diseases of the kidney, devoting special attention to tuberculosis, syphilis, chronic nephritis, bacilluria, pyelonephritis in pregnancy and the puerperium, etc. Joseph C. Bloodgood discusses shock, hemorrhage, anesthesia, wounds and their treatment, the surgery of the bloodvessels, of the muscles, and of the joints, and tumors. William T. Belfield treats of genito-urinary disorders—gonorrhœa, tuberculosis, tumors of the kidneys, renal calculi, diseases of the bladder and the prostate, etc. The volume closes with a practical therapeutic referendum by H. R. M. Landis, who clearly and succinctly sets forth the important advances in therapeutics during the preceding twelve months. One cannot say more of the volume as a whole than that it continues to justify its existence and to merit the confidence of the profession; it is a worthy successor of those that have gone before.

A. K.

THERAPEUTICS: ITS PRINCIPLES AND PRACTICE. By HORATIO C. WOOD, M.D., LL.D., Emeritus Professor of Materia Medica and Therapeutics in the University of Pennsylvania. Thoroughly Revised and Rewritten by HORATIO C. WOOD, JR., M.D., Associate Professor of Pharmacology in the University of Pennsylvania, Philadelphia. Fourteenth edition; pp. 778. Philadelphia and London: J. B. Lippincott Co., 1908.

SINCE Wood's *Therapeutics* was a pioneer of its kind, and has been, for more than a generation, the standard by which similar books have been measured, criticism is disarmed by the passage of time and a splendid record. At present, therefore, it suffices to chronicle the publication of a new, the fourteenth, edition. Many minor and a considerable number of noteworthy changes have been made throughout the volume in an effort to make it fully representative of the present state of pharmacology and therapeutics; the chapter on cathartics has been completely rewritten, that on diuretics has been remodelled to make it correspond with present views on the physiology and pharmacology of the subject, and new chapters have been added on opsonic therapy and the ion theory. As an exposition of the objects and aims, the science and art of drug therapy, the book is unsurpassed and doubtless will long continue to enjoy, as it merits, the unbounded confidence of the profession.

A. K.

PROGRESS OF MEDICAL SCIENCE.

MEDICINE.

UNDER THE CHARGE OF

WILLIAM OSLER, M.D.,

REGIUS PROFESSOR OF MEDICINE, OXFORD UNIVERSITY, ENGLAND,

AND

W. S. THAYER, M.D.,

PROFESSOR OF CLINICAL MEDICINE, JOHN'S HOPKINS UNIVERSITY, BALTIMORE, MARYLAND.

A Simple Method for the Serum Diagnosis of Syphilis.—TSCHERNOGUBOW (*Berl. klin. Woch.*, 1908, xlv, 2107) publishes a preliminary note on a simplified technique for the serum diagnosis of syphilis. The procedure is based on the following considerations: Fresh blood of a syphilitic patient contains the complement and the so-called syphilitic antibody in the serum. If extract of a syphilitic liver (syphilitic antigen) is added *in vitro* to such a blood diluted with a definite quantity of physiological salt solution, the mixture placed in a thermostat at 38° C. for one hour, and then inactivated serum, which is hemolytic for human red blood cells, is added, and the whole again placed in an incubator for two hours, there is formed a closed chain between the syphilitic antibody, the syphilitic antigen, and the complement, in which the complement is bound. Thus, the further addition of inactivated hemolytic serum is without effect upon the red blood corpuscles, since there is no available complement. If no syphilitic antibody is present in the blood, the complement remains free and hemolysis occurs after adding inactivated serum. The technique of the reaction is simple. One pricks the finger or ear of the patient, draws 0.1 c.c. of blood into a pipette, and dilutes it with about 1 c.c. of 0.9 per cent. sodium chloride solution. The Zeiss blood mixing pipette for white cells (1 to 10) is convenient for this purpose. The contents of the pipette are well mixed and emptied into a narrow test-tube (No. 1). Similarly, a second tube is filled (No. 2). Tube No. 3 contains blood diluted to the same degree with extract of a syphilitic liver in 0.9 per cent. sodium chloride solution. Tube No. 4 is prepared in the same way as No. 3. All four tubes are now placed in an incubator at 38° C. for one hour. At the end of this time 0.25 c.c. of inactivated serum hemolytic to human red blood cells is placed in Tubes 1 and 3. To

Tubes 2 and 4 a like quantity of 0.9 per cent. sodium chloride solution is added. All the tubes are again placed in an incubator for two hours and then in the ice chest over night. The result is noted the following morning. In Tube No. 1 hemolysis should always be found (if the serum contains complement). In the second tube there should be no hemolysis, as the red blood cells are in an isotonic salt solution. The result in the third tube will depend on the presence or absence of syphilitic antibody in the blood. If it is present the complement has been bound before the inactivated hemolytic serum was added, and no hemolysis occurs. If absent, the opposite result is obtained. The fourth tube simply serves as a control against any hemolytic action by the liver extract. Subsequently, Tschernogubow will describe the method in greater detail. It has proved trustworthy in his hands in a large number of cases. Its advantages are simplicity, the small amount of blood required, and the rapidity with which it can be carried out.

Precipitate Reaction with Lecithin, Sodium Glycocholate, and Sodium Taurocholate for the Diagnosis of Syphilis.—WM. J. BUTLER and W. T. MEFFORD (*New York Medical Journal*, 1908, lxxxviii, 822). Since the discovery of the serum reaction for syphilis many researches have been carried on to determine the identity of the substances contained in the extract used in the reaction, as well as to simplify the test. These researches have led to the use of other reactions in which, although the principle may vary, yet the result in each instance consists in a precipitate. Butler and Mefford have worked with the serum reaction and have compared the results obtained with it in the same cases, by the precipitate test. The performance of the latter test is comparatively easy and unattended with the many difficulties confronting one in making the complement-deviation test; it is made by mixing equal quantities of the serum to be examined and the precipitate reagent in a test tube and allowing it to stand at room temperature from fifteen to twenty hours. If the reaction is positive a precipitate will have formed and floats at the top of the fluid; on slightly tapping the tube it will descend in flocculi or whitish clouds. A turbidity of the fluid is not diagnostic. The results of these various tests in 74 cases examined may, according to these observations, be summed up as follows: The serum reaction surpasses in the percentage of positive results and in reliability the precipitate reactions for syphilis and parasyphilis. The glycocholate and taurocholate of sodium, especially the former, shows a large percentage of positive results in manifest syphilis, and a remarkably small percentage of positive reactions in control sera. The taurocholate gives the best results in positive reactions with parasyphilitic sera. The lecithin test is very unreliable and is definitely non-specific for syphilis. The results with active and inactivated sera in the control cases were practically alike with the glycocholate and taurocholate, but in the syphilitic and parasyphilitic cases an inactivated serum gave the greatest number of positive results, especially when the glycocholate was used. Butler and Mefford believe that more work will have to be done with these reactions before their real value can be determined, but in their examinations they found the test satisfactory; few positive reactions were obtained with these salts in the controls examined.

Hemophilia.—MOROWITZ and LOSSEN (*Deut. Arch. f. klin. Med.*, 1908, lxxxiv, 110) found in a case of hereditary hemophilia the usual prolongation of the coagulation time. From their studies upon a patient's blood they have shown that the delay in the coagulation time is to be attributed to insufficient formation of the fibrin ferment factors, especially the thrombokinase which is derived from blood platelets and leukocytes. That this is the only etiological feature of importance they do not assume. By means of suction applied to the skin of the back they were unable to demonstrate any greater liability to hemorrhage in their patient than in three normal adults examined.

Diphtheria Bacillus Septicæmia.—UCKE (*Fortschr. der Med.*, 1908, xxvi, 1005; *Zentralbl. f. Bakt.*, Band lvi) describes a patient with impure heart sounds, frequent pulse, trace of albumin in urine, an area of inflammation without fluctuation in the right gluteal region. The patient had had high fever for two weeks preceding admission to the hospital. An angina with membrane had preceded the inflammation of the gluteal region, and Loeffler's bacillus was found in the throat. Operation on the right gluteal region was without result at first and blood culture was negative. No result followed the injection of 300 units of anti-diphtheritic serum. At a subsequent dressing of the wound, however, large quantities of pus discharged through a fistulous opening. In the pus, diphtheria bacilli were found; their virulence was greatly diminished, as animal experiments showed. A second blood culture gave a pure growth of diphtheria bacilli. Only three similar cases are recorded in the literature.

Chyluria.—MAGNUS-LEVY (*Ztschr. f. klin. Med.*, 1908, lxvi, 482) reports his study of a case of chyluria. The patient was a man aged fifty-one years, from Western Prussia. Six years previously he had noted that his urine was white and turbid during the winter, but in the spring and summer, became clear. The condition had recurred regularly each winter since then. The only complaints were pain in the back, especially on the right side, and pain on micturition. At times clots were voided. In January, 1908, the patient complained of thirst, loss of weight, and polyuria. Urinary examination revealed chyluria and diabetes mellitus. The night urine was chylous; the day urine clear. On reclining during the day and sleeping upright in a chair, the urinary finding was reversed. The withdrawal of fat from the diet led to clear urine at night, but the other constituents of chyle, such as albumin and lymphocytes, were still present in the night urine. With increasing quantities of fat in the food, a corresponding increase in milkiness of the urine occurred. Fibrinogen, albumin, and globulin were determined by fractional precipitation with ammonium sulphate. Cystoscopy revealed the fact that the chylous urine came entirely from the right ureter. The urine was collected from the two kidneys by catheterization of the ureters and analyzed separately. By computation Magnus-Levy shows that the proportion of fat, albumin, and sodium chloride in the chylous urine corresponded exactly with the composition of chyle as given by Munk and Rosenstein. No ova or embryos were found in the urine, nor was the blood serum fatty. There are two theories as to the origin of chyluria: (1) That the condition